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Notice of Allowability

Application No.

10/701,271

Examiner

Esaw T. Abraham

Applicant(s)

FENG ET AL.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt filed on 12/28/06.
2. ☒ The allowed claim(s) is/are 1-11, 23-33 and 60-63 (renumbered as 1-26).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>01/29/07</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and or additions be acceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no latter than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael D. Wiggins on 01/29/07.

2. The application has been amended as follows:

Cancel claims 12-22 and 34-59.

DETAILED ACTION

Examiner's statement for reason for allowance

3. Claims **1-11, 23-33 and 60-63** have been allowed.

The following is an examiner's statement for allowance:

As per claim 1:

The prior art of record, Katayama et al. (U.S PUB. No: 2003/0135798) in figure 3 or figure 17 substantially teach or disclose a host interface (HOST I/F) (311) controls data transfer between the optical disk device and a host computer coupled to a scramble circuit (309) (data dependent scrambler) and randomizes data and the scrambled data further coupled to an error correction coding circuit (307) adds an error correction code to the randomized data and a run limit length coding circuit (305) modulates the data added with the error correcting code in accordance with the rule determined in advance and converted the modulated data to be recorded to an optical

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disk (301) a recorded medium (see page 4 paragraph [0078]) and further the obtained data is demodulated in a run length limit code decoding circuit (305) coupled to an error correcting circuit (308) to calculate an error position and an error value on the basis of error correcting code added by the error correction coding circuit (307) and the error are corrected (see col.5 paragraph [0079]). Furthermore, Katamaya et al. teach a seed generator (see figure 14, 2603) for giving a different seed to the random seed scrambler within the scrambler (2601) wherein the scrambler coupled to the error correcting circuit (see page 6 paragraph [0105]).

However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a data dependent scrambler (DDS) that receives said user data sequence and said CRCu bits, that selects a scrambling seed based on the N symbols of said user data sequence, that generates a scrambled user data sequence based on said user data sequence and said scrambling seed, and that generates a difference sequence that is based on said user data sequence and said scrambled user data sequence. Consequently, claim 1 is allowed over the prior art.

Claims **2-11 and 60-63** which is/are directly or indirectly dependent/s of claim 1 are also allowable over the prior art of record.

As per claim 23:

The prior art of record, Katayama et al. (U.S PUB. No: 2003/0135798) in figure 3 or figure 17 substantially teach or disclose a host interface (HOST I/F) (311) controls data transfer between the optical disk device and a host computer coupled to a scramble circuit (309) (data dependent scrambler) and randomizes data and the

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scrambled data further coupled to an error correction coding circuit (307) adds an error correction code to the randomized data and a run limit length coding circuit (305) modulates the data added with the error correcting code in accordance with the rule determined in advance and converted the modulated data to be recorded to an optical disk (301) a recorded medium (see page 4 paragraph [0078]) and further the obtained data is demodulated in a run length limit code decoding circuit (305) coupled to an error correcting circuit (308) to calculate an error position and an error value on the basis of error correcting code added by the error correction coding circuit (307) and the error are corrected (see col.5 paragraph [0079]). Furthermore, Katamaya et al. teach a seed generator (see figure 14, 2603) for giving a different seed to the random seed scrambler within the scrambler (2601) wherein the scrambler coupled to the error correcting circuit (see page 6 paragraph [0105]).

However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a scrambling means for receiving said user data sequence and said CRCu bits, for selecting a scrambling seed based on the N symbols of said user data sequence, for generating generates a scrambled user data sequence based on said user data sequence and said scrambling seed, and for generating a difference sequence that is based on said user data sequence and said scrambled user data sequence. Consequently, claim 1 is allowed over the prior art.

Claims **24-33** which is/are directly or indirectly dependent/s of claim 23 are also allowable over the prior art of record.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

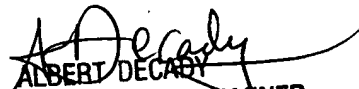
4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned (571) 273-8300.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Esaw Abraham

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